

Natural Selection Simulation

Name: _____ Date: _____

Group: _____ Group Role: _____

Overview - Students will model natural selection by using various utensils to "capture food"

Materials (most of these I leech from the dissecting equipment drawer)

- Bags of beans (northern or lima)
- Trays for holding the beans
- Clothespins
- Plastic spoons, plastic forks, plastic knives
- Tweezers
- Any utensil or item can serve as a mouthpart, use your imagination or improvise with available materials.

Introduction

Scene - On a distant planet there exists 5 species of a creature called a Woolybooger. Each Woolybooger is similar except their mouth has variations. All woolyboogers eat beans. Some woolyboogers have a clothespin mouth (demonstrate how to use the clothespin to pick up beans). Some woolyboogers have a tweezer mouth (demonstrate), some have a needle mouth (demonstrate). One year a new species of woolybooger was discovered, this woolybooger was called the Spoon-Mouthed Woolybooger (demonstrate). Each of you will play the part of a woolybooger on this planet. The spoon-mouth wooly booger is rare, so only two of you will get to be this type of wooly booger.

Procedure: You will run through several trials. Each trial will require your woolybooger to gain at least 20 beans. If 20 beans are not acquired during the time period, your woolybooger has died.

Discussion Questions:

1. What happens to animals that cannot compete as well with other animals in the wild?
2. Can you think of any real-life examples of the woollybooger, where one species has a definite advantage over another?
3. Sometimes animals that are introduced into an area that they never lived in before, out-compete and endanger resident species, why do you think this happens?
4. If only one species is considered the "fittest", why do we still have so many variations among species. Why do some birds have very long pointy beaks, while other birds have short flat beaks?
5. How do you think diseases can affect natural selection?